 National Transportation Safety Board <b>FACTUAL REPORT</b> AVIATION		NTSB ID: FTW95FA129		Aircraft Registration Number: N9448B	
		Occurrence Date: 03/02/1995		Most Critical Injury: Minor	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place ARDMORE	State OK	Zip Code 73401	Local Time 0815	Time Zone CST	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer CESSNA		Model/Series 208B		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
<p>HISTORY OF FLIGHT</p> <p>On March 2, 1995, at 0815 central standard time, a Cessna 208B, N9448B, was substantially damaged during a forced landing near Ardmore, Oklahoma. The instrument rated commercial pilot suffered minor injuries. The airplane, operating under the callsign Martinaire 633, was owned by Cessna Finance Corporation, of Wichita, Kansas, and operated by MartinAire of Dallas, Texas. Instrument meteorological conditions prevailed for the 14 CFR Part 135 cargo flight.</p> <p>According to the operator, the airplane departed the Tulsa International Airport (TUL), at 0715 with a payload of 1,300 pounds of cargo, destined for the Ardmore Downtown Executive Airport (1F0). A weather briefing was received and an instrument flight plan filed.</p> <p>The pilot stated he was cleared for the NDB Runway 35 Approach to Ardmore while level at 5,000 feet. The pilot further stated that as he proceeded from the VOR to the NDB for the procedure turn, the airplane accumulated ice at a rapid rate. The pilot stated that he added maximum available power, as he continued to cycle the wing/strut deicing boots.</p> <p>The pilot stated that the airplane was configured with flaps up, airspeed at 110 knots when he broke out into visual conditions at approximately 400 feet AGL. The pilot further stated that he was unable to arrest the 400 to 500 fpm rate of descent to hold altitude. The airplane impacted in an open pasture in a nose low attitude. The nose landing gear separated, the mains collapsed, and the cargo pod was crushed.</p> <p>PERSONNEL INFORMATION</p> <p>The pilot who is home-based at Tulsa, Oklahoma, stated that he had been on duty since 2130 the previous night, and had flown a total of 4.2 hours during the same duty period. His last training session and check ride were completed on February 24, 1995.</p> <p>AIRCRAFT INFORMATION</p> <p>The 1988 model airplane was issued a normal category airworthiness certificate on September 22, 1988. The airplane was certified as a single pilot aircraft, certified for flights into known light to moderate icing conditions. The airplane was not equipped with deicing boots for the nosecone of the cargo pod or the landing gear struts.</p> <p>A review of the airframe and engine records by the FAA inspector, did not reveal any anomalies, uncorrected maintenance, or overdue airworthiness directives. All of the aircraft's deicing and anti-icing systems were reported as operational prior to the flight. The pilot had not reported any maintenance anomalies prior to the flight; however, during a post-accident interview the pilot</p>					
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Occurrence Type: Accident

**Narrative** (Continued)

stated that forward visibility through the detachable electric windshield anti-ice panel was inadequate, and his forward visibility was completely obscured by the accumulation of clear ice on the windshield.

A review of the loading of the airplane revealed that at the time of the accident, the airplane was being operated within the prescribed weight and balance limits.

**METEOROLOGICAL INFORMATION**

The Automatic Weather Observation System (AWOS) weather report for Ardmore for 0700 CST was reported as sky partially obscured, 700 overcast, with a mile and a half visibility in drizzle. Temperature was 26 degrees, with a dew point of 25 degrees. The weather minimums for the NDB Runway 35 approach were 638 feet and 1 mile visibility.

**COMMUNICATIONS**

The pilot informed the airport manager on the Unicom frequency, that he had the current AWOS weather, and he was executing the NDB Runway 35 approach. The airport manager stated that he informed the pilot that freezing drizzle was present and the pilot acknowledged the transmission. His last radio transmission occurred when the pilot reported "procedure turn inbound" to the Unicom.

**WRECKAGE AND IMPACT INFORMATION**

The airplane impacted on an open pasture approximately 2 miles south of the approach end of runway 35, and one mile west of the extended centerline. Ground scars were found at the initial point of impact on a measured heading of 155 degrees. Chunks of rime and mixed ice contoured to the shape of several parts of the aircraft were found at the initial point of impact. The nose wheel strut and several other components associated with the nose wheel were found within 20 feet of the initial point of impact.


After sliding for approximately 100 yards, the airplane came to rest on a measured magnetic heading of 330 degrees. All three composite blades separated at the hub. The spinner and hub assembly remained attached to the propeller shaft. The two main landing gears were found pushed aft and up, touching the respective wing strut. The belly cargo pod was crushed up and to the left.


The wing flaps were found extended to 20 degrees. The elevator trim was found in the full nose up position. The engine inertial separator was found in the bypass mode.


**ADDITIONAL DATA**

The wreckage was released to the owner's representative on March 2, 1995, following completion of the field portion of the investigation.

A teardown of the propeller was performed at the propeller manufacturer's facility. A copy of the examination report is enclosed.

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		Occurrence Type: Accident			
<b>Landing Facility/Approach Information</b>					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach: VOR/TVOR					
VFR Approach/Landing: Forced Landing					
<b>Aircraft Information</b>					
Aircraft Manufacturer CESSNA		Model/Series 208B		Serial Number 208B0121	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Tricycle					
Homebuilt Aircraft? No	Number of Seats: 2	Certified Max Gross Wt.	8750 LBS	Number of Engines: 1	
Engine Type: Turbo Prop	Engine Manufacturer: P&W	Model/Series: PT6A-114	Rated Power: 600 HP		
<b>- Aircraft Inspection Information</b>					
Type of Last Inspection AAIP	Date of Last Inspection 12/15/1994	Time Since Last Inspection 190 Hours	Airframe Total Time 3669 Hours		
<b>- Emergency Locator Transmitter (ELT) Information</b>					
ELT Installed? Yes	ELT Operated? No	ELT Aided in Locating Accident Site?			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner CESSNA FINANCE CORP.		Street Address P.O. BOX 308			
		City WICHITA	State KS	Zip Code 67201	
Operator of Aircraft MARTINAIRE INC.		Street Address 8030 AVIATION PLACE, # 2000			
		City DALLAS	State TX	Zip Code 75235	
Operator Does Business As:			Operator Designator Code: MT9A		
<b>- Type of U.S. Certificate(s) Held:</b>					
Air Carrier Operating Certificate(s): On-demand Air Taxi					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 135: Air Taxi & Commuter					
Type of Flight Operation Conducted: Unknown					
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<b>First Pilot Information</b>																																																																																						
Name On File			City On File		State On File	Date of Birth On File	Age 31																																																																															
Sex: M	Seat Occupied: Left		Principal Profession: Civilian Pilot			Certificate Number: On File																																																																																
Certificate(s): Flight Instructor; Commercial																																																																																						
Airplane Rating(s): Multi-engine Land; Single-engine Land																																																																																						
Rotorcraft/Glider/LTA: None																																																																																						
Instrument Rating(s): Airplane																																																																																						
Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Instrument Airplane																																																																																						
Type Rating/Endorsement for Accident/Incident Aircraft?					Current Biennial Flight Review?																																																																																	
Medical Cert.: Class 1		Medical Cert. Status: Valid Medical--no waivers/lim.			Date of Last Medical Exam: 12/19/1994																																																																																	
<table border="1"> <thead> <tr> <th rowspan="2">- Flight Time Matrix</th> <th rowspan="2">All A/C</th> <th rowspan="2">This Make and Model</th> <th rowspan="2">Airplane Single Engine</th> <th rowspan="2">Airplane Multi-Engine</th> <th rowspan="2">Night</th> <th colspan="2">Instrument</th> <th rowspan="2">Rotorcraft</th> <th rowspan="2">Glider</th> <th rowspan="2">Lighter Than Air</th> </tr> <tr> <th>Actual</th> <th>Simulated</th> </tr> </thead> <tbody> <tr> <td>Total Time</td> <td>4374</td> <td>2065</td> <td>4256</td> <td>100</td> <td>2182</td> <td>435</td> <td>70</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pilot In Command(PIC)</td> <td>4110</td> <td>2065</td> <td>4256</td> <td>100</td> <td>2175</td> <td>435</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instructor</td> <td>1784</td> <td></td> <td>1784</td> <td></td> <td>20</td> <td>300</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 90 Days</td> <td>180</td> <td>180</td> <td>180</td> <td></td> <td>160</td> <td>20</td> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 30 Days</td> <td>60</td> <td>60</td> <td>60</td> <td></td> <td>50</td> <td>7</td> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 24 Hours</td> <td>4</td> <td>4</td> <td>4</td> <td></td> <td>3</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Actual	Simulated	Total Time	4374	2065	4256	100	2182	435	70				Pilot In Command(PIC)	4110	2065	4256	100	2175	435					Instructor	1784		1784		20	300					Last 90 Days	180	180	180		160	20	2				Last 30 Days	60	60	60		50	7	2				Last 24 Hours	4	4	4		3	2				
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Seatbelt Used? Yes		Shoulder Harness Used? Yes			Toxicology Performed? No		Second Pilot? No																																																																															
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Type of Flight Plan Filed: IFR																																																																																						
Departure Point		State		Airport Identifier		Departure Time		Time Zone																																																																														
TULSA		OK		TUL		0730		CST																																																																														
Destination		State		Airport Identifier																																																																																		
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<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
	0000		0 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Unknown			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Overcast		700 Ft. AGL	Visibility: 1.75 SM	Altimeter: 30.00	"Hg
Temperature: -3 °C	Dew Point: -4 °C	Wind Direction:		Density Altitude: Ft.	
Wind Speed: Light and Variable	Gusts:	Weather Conditions at Accident Site: Instrument Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Moderate			
Restrictions to Visibility: Fog					
Type of Precipitation: Freezing Drizzle; Freezing Rain					

<b>Accident Information</b>					
Aircraft Damage:		Aircraft Fire:		Aircraft Explosion	
Classification:					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot			1		1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -			1		1
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	1		1

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	Occurrence Type: Accident	
<b>Administrative Information</b>		
Investigator-In-Charge (IIC) HECTOR R. CASANOVA		
Additional Persons Participating in This Accident/Incident Investigation:  GEORGE J COMBS FAA FSDO OKLAHOMA CITY, OK 73108		
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